Claims

1. A method for isolating a pluripotent cell which is at least partially committed to a given developmental pathway comprising the steps of:

(a) selecting a population of pluripotent cells;

(b) sorting the cells according to *Sox* gene expression; and

(c) isolating those cells which express a given *Sox* gene.

2. A method according to claim 1, wherein the population of cells for is derived from CNS tissue.

3. A method according to claim 1, wherein the population of cells is derived from a cell culture.

4. A method according to any preceding claim, wherein the expression of the *Sox* gene is detected by nucleic acid hybridization.

5. A method according to any one of claims 1 up to 3, wherein the expression of the *Sox* gene is detected by a binding of a SOX polypeptide to a detectable ligand.

6. A method according to claim 5, wherein the detectable ligand is a labeled immunoglobulin.

7. A method according to claim 5, wherein the detectable ligand is a labeled oligonucleotide complementary to *Sox* mRNA.

8. A method according to any preceding claim, wherein the expression of the *Sox* gene is detected by FACS analysis.

9. A method for isolating a desired cell type from a population of cells, comprising the steps of:

(a) transfecting the population of cells with a genetic construct comprising a coding sequence encoding a detectable marker operatively linked to control regions sensitive to modulation by a SOX polypeptide;

(b) detecting the cells which express the selectable marker; and

(c) sorting the cells which express the selectable marker from the population of cells.

10. A method for isolating a neuroblastic cell from a population of cells, comprising the steps of:

(a) transfecting the population of cells with a genetic construct comprising a coding sequence encoding a detectable marker operatively linked to a control sequence which is transactivatable by a SOX polypeptide;

(b) detecting the cells which express the selectable marker; and

(c) sorting the cells which express the selectable marker from the population of cells.

11. A method according to claim 9 or claim 10, wherein the selectable marker is a fluorescent or luminescent polypeptide.

12. A method according to claim 9 or claim 10, wherein the selectable marker is a polypeptide detectable at the surface of the cell.

13. A method for producing a cell committed to a specified lineage, comprising the steps of:

(a) transfecting a pluripotent stem cell with a genetic construct comprising a coding sequence expressing a SOX polypeptide;

(b) culturing the stem cells in order to differentiate them into neural cells; and

(c) isolating the neural cells thereby produced.

14. A method according to claim 15, wherein the *Sox* sequence is operatively linked to an inducible promoter.

15. A method according to claim 13 or claim 14, wherein the cell is further transfected with a vector comprising a sequence encoding a regulator which modulates the expression of the *Sox* sequence.

16. A method according to any preceding claim, wherein the *Sox* gene is a member of *Sox* Group A.

17. A method according to claim 16, wherein the *Sox* gene is *Sox1* or *Sox2*.